

I. Introduction

The field office carries out (1) the original inspection and weighing of grain under the U.S. Grain Standards Act of 1976, (2) the permissive inspection, weighing, and check loading of rice, pulses, processed grain products and other assigned commodities under the Agricultural Marketing Act of 1946, as amended, and (3) the supervision of these activities conducted by licensed inspectors and weighers employed by state governments or private firms.

The incumbent serves as an Agricultural Commodity Technician (ACT) in a grain inspection field or sub-office in support of the activities of the office. At this level, the technician has sufficient experience to independently perform the full range of sampling, chemical and physical testing, and weighing in the office, serve as a troubleshooter in resolving technical issues related to these areas, and has the ability to communicate the results to industry personnel. In addition, the technician has considerable experience with the predominant commodity of the market.

Due to the nature of the industry, the technician will work a variety of shifts at all points of inspection within the circuit serviced by the field or sub office. The incumbent may also be responsible for general upkeep of work areas.

The incumbent is responsible for his or her own transportation to and from assigned points of inspection and may be required to operate a motor vehicle on official business.

II. Major Duties

The technician performs sampling, weighing, and chemical and physical testing and assists in the inspection of products standardized under the USGSA. More specifically, the employee performs the full range of functions assigned to a field office as follows:

A. Weighing: Ensures that accurate weights and accurate determinations of events that support the official weight certification. Detects and identifies errors such as incorrect printouts on tapes and scale tickets of weight and identification information, failures to weigh or record weight results due to power failure, poor housekeeping, damaged load receiving elements, and problems in the grain delivery systems. Verifies the correct operations of remote visual displays and electronic lockouts. When remedial action is required, notifies senior graders or immediate supervisor so that action may be taken to immediately correct the situation or to discontinue official weighing on the scale in question. May also be responsible for check-weighing, loading, and sampling of bagged or processed commodities.

B. Inspection: Performs visual inspection and mechanical measurements to assist in establishing the kind and/or class and quality of grain/rice/pulses and related commodities to be

processed. Physical analysis includes factors used in the grading process such as odor, condition, insect identification criteria and infestation criteria, distinctly low quality (DLQ)/sample-grade determinations, moisture and other defects factors within the grading standards. He/she prepares samples for official inspection through the operation of a dockage tester, boerner divider, strandsizer, rice shelter, rice filler, and test weight apparatus as appropriate for each type of grain to be inspected.

C. Physical Tests: Prepares samples for inspection and file sample retention by dividing gross samples of grain/rice/pulses or related commodities to obtain official work and file sample portions. Maintains a dated sample retention system used for reinspection, appeal, and board appeal (BAR) inspections. Obtains "work" portions of specified weight of grain/rice/pulses or related commodities for inspection, and also processes industry requests for submitted samples and related inspection activities. Determines moisture content of grain/rice/pulses or related commodities and properly completes data logs for all laboratory functions.

D. Chemical Tests: Performs the full range of laboratory chemical tests found in assigned field office which involves preparing samples and solutions, calibrating the equipment when required, conducting the test, recording and determining the reliability of the test results. Responsible for installing new testing processes and procedures, conducting the tests as they are being phased in, and providing over-the-shoulder training on the new testing procedures for other GS- 1981s. Serves as a troubleshooter, resolving problems with all the tests common to a field location. Tests include, but are not limited to:

1. Mycotoxins: Conducts mycotoxin analyses using approved test methods. These tests measure mycotoxin which is a by-product of certain types of mold growth in a wide range of commodities. Special safety precautions are used while performing these analyses.

2. Protein/Oil: Conducts near-infrared reflectance testing (NIRT) which determines the protein/oil content of grains. Performs daily check-testing procedures to determine the calibration of (NIRT) analysis equipment. Prepares samples for analysis and maintains all appropriate environmental condition records and data logs.

3. Falling Number: Using the falling number testing method, makes specified measures of wheat flour and distilled water to perform a timed physical mixing procedure which, in conjunction with mechanical agitation and heating, measures the levels of Alpha Amylase activity in wheat.

4. Nuclear magnetic resonance analysis: Performs (NMR) testing, the method used for official sunflower seed oil determination. The NMR method is based on the principle of activating hydrogen atoms in the oil using electromagnetic radiation and a magnet.

5. Single kernel hardness test and/or glucosinolate test (i.e., 00-dip-test), and/or bleach test: Conducts the single kernel hardness test which measures the hardness distribution, as well as the average hardness of wheat kernels and provides information regarding potential wheat classifications (hard wheat, soft wheat, and mixed wheat). It also provides information about size, moisture, and weight of individual kernels. This analysis is provided by proper operation of the perten SKCS-4100 single kernel characterization system. The 00-dip test is a screening process that determines the level of glucosinolates prior to grading the oil seed canola. The Bleach Test is

a process that removes seed coats from kernels of sorghum and wheat prior to class identification or germ-damage analysis.

6. Total Oil & Free Fatty Acid: Conducts total oil testing of milled rice in accordance with the Rice Inspection Handbook. Makes specified measures of rice flour and chemicals to perform a timed extraction, weighing, and calculations procedure. Special safety precautions are used while performing this analysis.

7. Enrichment: Performs enrichment analysis in determining the quality of milled rice under specification other than the standards. This quantitative test determines whether a sample of rice is enriched or not enriched with respect to the iron component.

E. Sampling: Monitors grain collected by mechanical (diverter type) samplers during export loading operations. Uses knowledge of inspection and weighing procedures for loading bulk grain to properly separate and maintain the integrity of sub-samples, components, and finished sublots for inspection. Calculates the proportional combination weights when single sublots are sampled through multiple systems of variable loading rates. Detects grain odors and distinguishes insect identification criteria and distinctly low quality (DLQ)/sample grade factors which affect compliance with continuous export weighing and inspection procedures/operations. Other sampling activities, when required, include using all types of probe, tier, ellis-cup, pelican, and inbound diverter type equipment to sample rail cars, barges, trucks, etc..

F. Stowage Examinations: Conducts stowage examinations in ship holds, barges, hopper cars, and other containers to ensure cleanliness and acceptability of storage handling facilities.

G. Commodity Inspections: Samples, checkweighs, checkloads, and inspects food and non-food products for AMS, FSA, DPSC, VA, and private contracts. The ACT may be required to perform sanitary inspections in processed commodity plants or mills.

H. Other related duties as assigned.

III. SUPERVISION AND GUIDANCE RECEIVED

The technician receives general administrative guidance from a Supervisory or Senior Agricultural Commodity Grader. The employee carries out his/her technical assignments with complete independence based on past experience and, as necessary, adapts work procedures to the specific situation. The technician independently applies the weighing and inspection procedures and regulations to the elevator systems and commodities commonly encountered in the circuit. Technical problems are generally corrected by the technician. The ACT may request assistance when applying a standard or regulation to new or unusual situations. Inspection and weighing reports are periodically reviewed for adherence to normal procedures and for conformity to expected results.

The procedures for doing the work have been established and a moderate number of guides are available. Guides include testing methods and procedures, and GIPSA procedural and policy manuals covering the other functions performed on this job. However, when testing problems occur or when there are gaps in the guides that do not cover a specific action, the technician makes procedural adjustments. The technician is not directly responsible for adapting or modifying the guides extensively or permanently.

IV. OTHER

Physical Demands

Phases of work may require considerable physical exertion. Obtaining samples requires climbing onto trucks, barges, hoppers, rail cars, man lifts, etc., using probes, pelicans, and similar sampling devices; and, moving and lifting grain containers or sacks weighing up to 55 pounds. Ship hold inspection involves climbing into and out of the hold and often at heights greater than 75 feet.

Work Environment

The work involves regular and recurring work in grain elevators subject to potentially explosive concentrations of grain dust. Works in rice mills, processed product plants, dock loading and unloading facilities and under various weather conditions. In addition, the technicians are susceptible to high levels of hazardous fumigants which are hard to defend against. Must continuously take extensive safety precautions to avoid serious accidents resulting from these hazards.

Civil Rights

Adheres to Civil Rights policies, goals, and objectives in performing the duties of this position. Assures that written and oral communications are bias-free and that differences of other employees and clients are respected and valued.